TPS-G-TPI

Isys® G-Series Touchpanel Interface w/QuickMedia™ Transport Technology

The TPS-G-TPI is designed to allow for the integration of non-Crestron touchscreens into the Crestron control system. The TPS-G-TPI transforms a third-party display device into a full-featured Isys G-Series touchpanel, producing stunning control graphics with dual-window display of HD video and high-res RGB signals. It is perfect for use with any plasma display equipped with a touch-sensitive overlay, as well as a variety of LCD touchscreen monitors and interactive pen displays.

Versatile Touchpanel Interface
To serve a wide range of touchpanel applications from multimedia presentation to interactive kiosks, the TPS-G-TPI works with numerous touchscreen and pen display products from 3M/Microtouch®, SMART Technologies®, Wacom® and many others. Alternately, its output can be displayed on any high-resolution monitor or large screen projector, providing a graphical interface that's fully navigable using an onscreen mouse-driven cursor. Even without a touchscreen or mouse attached, the TPS-G-TPI makes an exceptional high-resolution graphics/display generator perfect for voting systems, command centers, public information, and more.

Isys®
The TPS-G-TPI offers vibrant 24-bit color depth with 8-bit alpha channel transparency to produce incredible 3D graphics using DNav dynamic menu objects, dynamic graphics and text, animations, multimode objects, and PNG translucency - all with astonishing speed.

Synapse™
Crestron's exclusive Synapse Image Rendering Algorithm enables system programmers to produce amazing graphics - faster and easier. Advanced antialiasing delivers crisper, sharper objects and text. Enhanced 3D effects add new depth and style. And because Synapse is native to the touchpanel, memory requirements and upload time are substantially reduced.

Dual-Window HD Video and RGB*
The TPS-G-TPI can simultaneously display two fully-scalable, full-motion video windows, each supporting standard video, HDTV, and high-resolution RGB signals from external AV and computer sources. Discrete video scalers with motion adaptive deinterlacing bring out the highest detail, minimizing visible scan lines and motion artifacts for a truly remarkable picture. Advanced gamma correction and built-in time base correction ensure accurate color reproduction and a jitter-free image.

Touch-the-PC
Crestron's exclusive "Touch-the-PC" technology allows real-time touchpanel navigation of any Windows PC through a direct high-speed serial connection.

Interactive Annotation
Built-in annotation capability allows presenters to write or draw over live computer and video images right on the touchscreen using a finger, stylus, or mouse. Moving images can also be frozen onscreen to allow annotation over a still picture. Brush sizes and colors are selectable on the fly. Remote annotation capability allows multiple touchpanel users to draw over the same image, supporting interactive annotation between several participants in a courtroom, classroom, or similar environment. The image can also be output to a video display for live audience presentation.

Audio Features
An audio output is provided for connection to the display device or separate amplified speakers, supporting customizable button feedback, personalized sounds, and voice prompts, plus amplification of audio signals from any connected AV or computer sources*.

QuickMedia™
Audio and video connections are facilitated using Crestron's revolutionary QuickMedia transport, providing a flexible yet remarkably simple wiring solution. Through QuickMedia (QM), the TPS-G-TPI interfaces directly with other QM-based products using inexpensive CAT5e type cable.

The two QM Input ports each support non-interlaced RGB up to 1600 X 1200 pixels, as well as composite, S-Video, and component video signals. QM Input #1 includes software-adjustable compensation for cable runs up to 450 feet; Input #2 allows up to 300 feet for video and HDTV, and shorter distances for RGB computer signals. Both QM Inputs receive audio signals from external microphone and stereo line level sources. The QM Output port allows simultaneous output of the touchscreen image to feed an additional remote display device.

High-Speed Connectivity
Both Cresnet and high-speed Ethernet are standard on the TPS-G-TPI, providing for easy network integration and seamless communications with Crestron control systems.

> High-performance touchpanel interface

> 24-Bit Isys graphics

> Synapse image rendering algorithm

> DNav dynamic menu objects

> Dual-window HD video and RGB display

> Interactive annotation capability

TPS-G-TPI

> QuickMedia AV connectivity

> High-speed Ethernet and Cresnet communications

> Single-space rack-mountable

SPECIFICATIONS

Device Support†

Mouse: Microsoft Serial Mouse, Kensington Serial Mouse, Generic USB Mouse
Touchscreen / Pen Display: 3M Dynapro SC3, 3M Microtouch, CyberTouch, DisplayMate, Elo TouchSystems, SMART Technologies, Wacom
Note: Specific models and protocols subject to verification, refer to Website or contact factory for latest device support

Processor

CPU: 32-bit Freescale ColdFire® Microprocessor

Memory

DDR RAM: 128 MB
Flash: 64 MB
Compact Flash: Accepts up to 4GB Type II CF (not included)
Maximum Project Size: 145 to 160 MB depending upon screen resolution

Graphic Engine

Isys engine, 24-bit non-palette graphics + 8-bit alpha channel transparency, 16.7 million colors, Synapse image rendering algorithm, multi-mode objects, DNav dynamic menu objects, dynamic graphics, PNG translucency, full-motion (60 fps) animation, transition effects, color key video windowing, remote annotation

Ethernet

10BaseT/100BaseTX, auto-switching, auto-negotiating, auto-discovery, full/half duplex, TCP/IP, UDP/IP, CIP, DHCP, IEEE 802.3U compliant

Video*

Input Signal Types : RGB and auto-detecting composite, S-Video, or component video
Input Formats: SDTV 480i (NTSC) & 576i (PAL), EDTV 480p & 576p, HDTV 720p & 1080i; RGB(VGA) up to UXGA 1600 x 1200
Color Depth: 24-bit, 16.7M colors
Features: Dual-window each scalable to full-screen, time base correction, gamma correction, line doubling, motion adaptive deinterlacing, reverse 3:2/2:2 pulldown

Audio*

Hardware Features: Stereo headphone/line-level audio output, internal volume control and audio mixer
Audio Feedback (WAV): 8-bit PCM, mono, 8 kHz sampling rate
D-A Conversion (QM): 24-bit, 48 kHz

Buttons & LED Indicators

Reset: (1) Recessed miniature pushbutton, reboots the touchpanel interface
PWR: (1) Green LED, indicates DC power applied to NET port or 24VDC jack

Connectors

QM IN 1 : (1) 8-wire RJ45 female, QuickMedia input port;
Signal types: Dynamically configurable under system control as:
- (1) RGB input with stereo program audio and (2) mic channels, or
- (1) Auto-detecting component (YPbPr), S-Video (Y/C), or composite video input with stereo program audio and (2) mic channels;

RGB Format: RGBHV;
RGB Input Resolution, Non-interlaced: 640 x 480 minimum to 1600 x 1200 maximum (60 Hz limit at 1600 x 1200);
Video/HDTV Formats: 480i (NTSC), 576i (PAL), 480p, 576p, 720p and 1080i;
Horizontal Frequency: 15 to 100 kHz;
Vertical Frequency: 50 to 85 Hz;
Delay Skew Compensation: 0 - 22 nS;
Connects to QM output port of a **QM-TX** or other QuickMedia device via **CRESCAT-QM** or **CRESCAT-IM** cable;
Maximum Cable Length: 450 ft (aggregate distance from QM origination)
QM IN 2 : (1) 8-wire RJ45 female, QuickMedia input port;
Signal Types: Dynamically configurable under system control as:
- (1) RGB input with stereo program audio and (2) mic channels, or
- (1) Auto-detecting component (YPbPr), S-Video (Y/C), or composite video input with stereo program audio and (2) mic channels;

RGB Format: RGBHV;
RGB Input Resolution, Non-interlaced: 640 x 480 minimum to 1600 x 1200 maximum (60 Hz limit at 1600 x 1200);
Video/HDTV Formats: 480i (NTSC), 576i (PAL), 480p, 576p, 720p and 1080i;
Horizontal Frequency: 15 to 100 kHz;
Vertical Frequency: 50 to 85 Hz;
Delay Skew Compensation: none;
Connects to QM output port of a **QM-TX** or other QuickMedia device via **CRESCAT-QM** or **CRESCAT-IM** cable;
Maximum Cable Length (Video/HDTV) : 300 ft (aggregate distance from QM origination);
Maximum Cable Length (RGB @ 60Hz): 216 ft for 640x480, 140 ft for 800x600, 84 ft for 1024x768, 70 ft for 1280x768, 30 ft for 1600x1200 (using **CRESCAT-QM** or **CRESCAT-IM** cable)

QM OUT 1 : (1) 8-wire RJ45 female, QuickMedia output port containing RGB (Same as VGA OUTPUT) and WAV file audio signals;
Format: RGBHV;
Output Resolution: same as VGA OUTPUT;
Connects to QM input port of any QuickMedia device via **CRESCAT-QM** or **CRESCAT-IM** cable
VGA OUTPUT: (1) DB15HD female, RGB output;
Format: RGBHV;
Output Resolution: Software programmable 800x600, 1024x768, 1280x768, 1366x768, 1152x864, 1280x1024†;
Sync Output Type: RGBHV;
Sync Output Level: TTL, 4.0 Vp-p;
Vertical Frequency: 60Hz fixed
HEADPHONES: (1) 3.5 mm TRS mini phone jack;
Stereo headphone or unbalanced stereo line-level audio output;
Output Power: 12mW per channel;
Minimum Impedance: 32 ohms
RS-232: (1) 6-pin RJ11 female;
Computer console or mouse/touchscreen input port†;
Bidirectional RS-232 up to 115.2k baud;
Hardware and software handshaking support
LAN: (1) 8-wire RJ45 with 2 LED indicators, 10BaseT/100BaseTX Ethernet port;
Green LED indicates link status;
Yellow LED indicates Ethernet activity
24VDC: (1) 2.1mm barrel DC power jack;
24 Volt DC power input (**PW-2420RU** power supply sold separately)
NET: (1) 4-pin 3.5mm detachable terminal block;
Cresnet Slave Port, connects to Cresnet control network
USB 1 - 2 : (2) USB Type A female (future mouse/touch inputs)†
GND: (1) 6-32 screw, chassis ground lug
MEMORY EXP. : (1) Type II Compact Flash card slot for memory expansion
PC CARD A - B : (2) Type II PC Card slots;
(Reserved for future applications)†

TPS-G-TPI

Power Requirements

24VDC: 45 Watts (1.88 Amps) @ 24 Volts DC (**PW-2420RU** power supply sold separately)
Cresnet Power Usage : 45 Watts (1.88 Amps @ 24 Volts DC)
Note: Power should only be applied to the 24VDC power jack OR the NET port, not both.

Environmental

Temperature: 50° to 113°F (10° to 45°C)
Humidity: 10% to 90% RH (non-condensing)

Enclosure

Chassis: Steel, black matte powder coat finish, vented top and sides, internal fan
Faceplate: Extruded aluminum, black matte powder coat finish with polycarbonate label overlay
Mounting: Freestanding or 1U 19-inch rack-mountable (adhesive feet and rack ears included)

Dimensions

Height: 1.80 in (4.57 cm);
1.70 in (4.32 cm) without feet
Width: 17.03 in (43.24 cm);
19.0 in (48.26 cm) without ears
Depth: 10.43 in (26.49 cm)

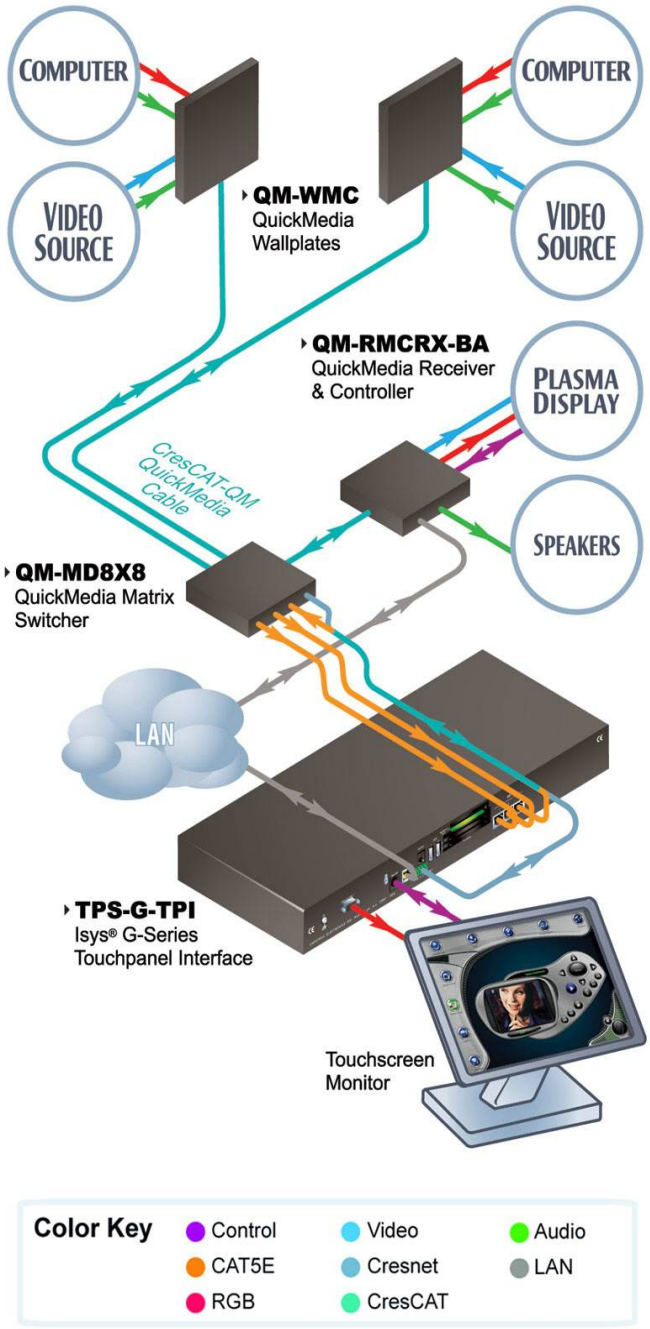
Weight

5.0 lb (2.2 kg)

AVAILABLE ACCESSORIES

PW-2420RU : Power Supply
QM-TX : QuickMedia Transmitter
TPS/TPMC-CBL-T: Triamese Interface Cable
ST-PK: Programming Cable Kit

TPS-G-TPI in a QM System Application



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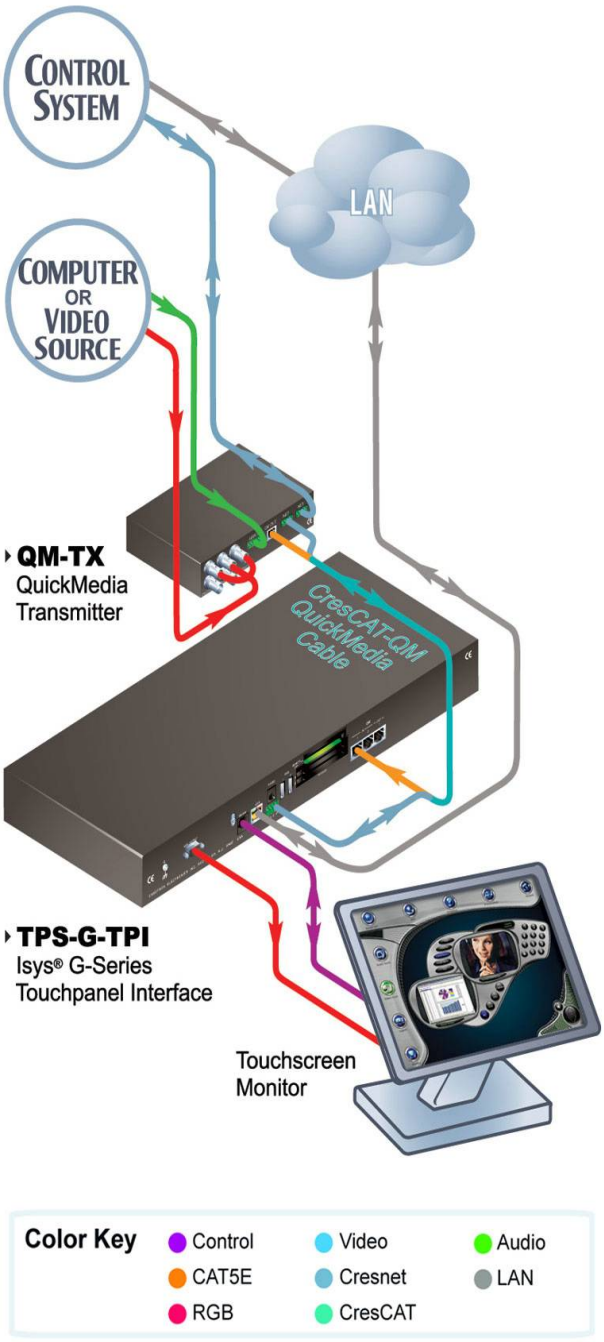
TPS-G-TPI

TPS-G-TPI using a Single QM transmitter



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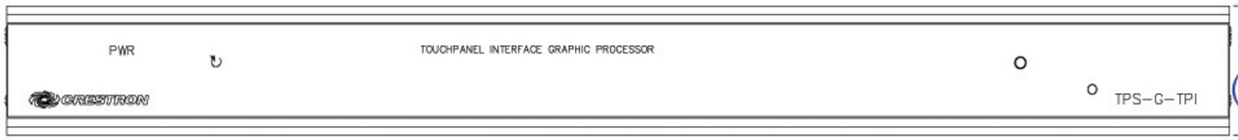

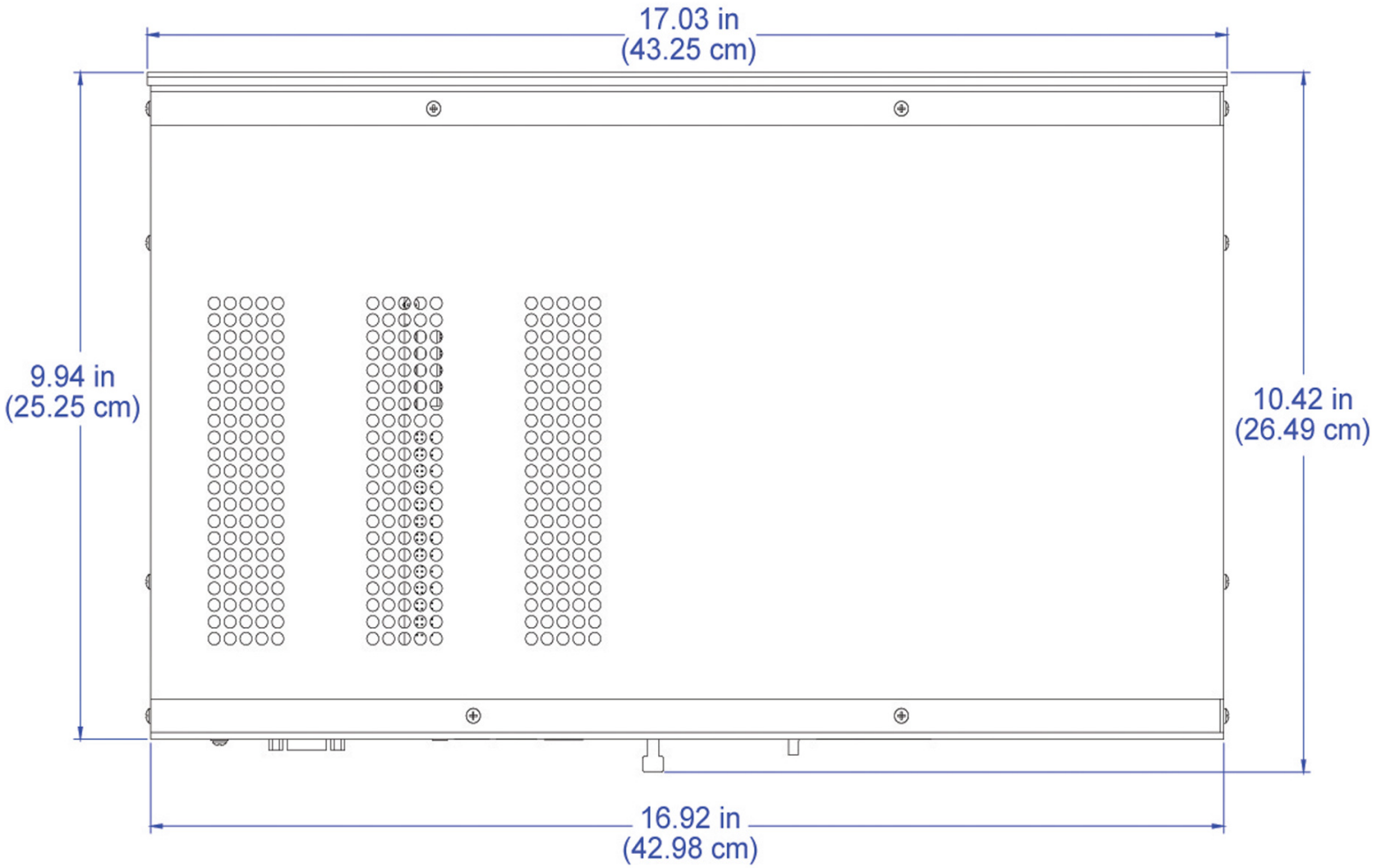

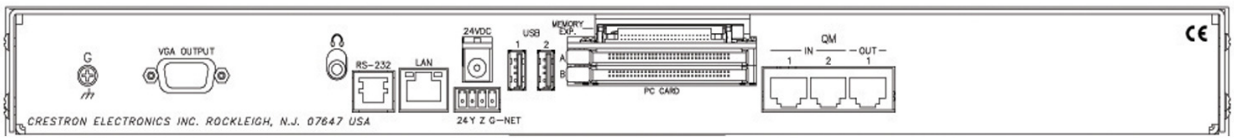

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